‘Cis’ bound states of three localized pulses of the cubic–quintic CGL equation

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Résumé en anglais	We investigate triplet bound states with a new symmetry, called 'cis', using the cubic–quintic CGL equation. We show that the leading term of the functional J[ψ], which governs the evolution of the momentum of the solution to the CGL equation, vanishes for the cis-symmetry. Numerical investigations show that stable cis triplet bound states are solutions of the CGL equation. Quasi-stable cis-states are also found, and also a stable quasi-stationary asymmetrical triplet state. Then we show that it is possible to experimentally distinguish between the trans and cis triplet states, using either the optical spectrum or the collinear autocorrelation trace.
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